UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Via Electronic Mail and U.S. Postal Service Mail
Certified Mail Receipt No. 7008 1830 0002 6279 5318

April 1, 2011

Ken Riesz, Plant Manager
El Segundo Power, LLC
301 Vista Del Mar Boulevard
El Segundo, CA 90245

George Piantka, P.E., Director Environmental
NRG Energy, West
5790 Fleet Street, Suite 200
Carlsbad, CA 92008

Re: Polychlorinated Biphenyls (PCBs) Under Toxic Substances Control Act – USEPA Conditional Approval Under 40 CFR 761.61(a) and 761.61(c) of "Notification of In-Place Soil Characterization and Remediation, Former Units 1&2 Powerblock Foundation, El Segundo Generating Station, El Segundo, California," Dated March 2, 2011

Dear Mr. Ken Riesz and Mr. Piantka:

The U.S. Environmental Protection Agency (USEPA) is approving with conditions the *"Notification of In-Place Soil Characterization and Remediation, Former Units 1&2 Powerblock Foundation, El Segundo Generating Station, El Segundo, California,"* dated March 2, 2011 and prepared by AECOM for El Segundo Power, LLC. This document serves as the polychlorinated biphenyls (PCB) cleanup notification (Notification) required in the Toxic Substances Control Act (TSCA) PCB regulations. Such Notification is for the El Segundo Generating Station (ESGS) Site which is the 6.5-acre northern portion of the ESGS located at 301 Vista Del Mar Boulevard, El Segundo, California, 90245.

USEPA received the Notification on March 2, 2011 and requested additional information on the Notification during the March 21, 2011 conference call with AECOM, NRG Energy, Inc. (NRG), and El Segundo Power, LLC (ESP) and subsequent to that call. Therefore, USEPA's 30-day clock set forth in 40 CFR 761.61(a)(3) for responding to the Notification was indefinitely tolled.

USEPA is approving the Notification under the TSCA regulations in 40 CFR 761.61(a) and 40 CFR 761.61(c). Among other things, the Notification involves additional characterization sampling for PCBs in soils and concrete, cleanup of PCB-contaminated soils via excavation, offsite disposal of PCB remediation waste (e.g., soils, concrete), and onsite disposal of PCB remediation waste (i.e., concrete and/or soils) in accordance with the attached approval and the TSCA PCB regulations. The Notification also addresses characterization of natural gas pipelines associated with Units 1 and 2 for presence of PCBs and offsite disposal; and characterization of soils beneath the pipelines. Natural gas pipelines contaminated with PCBs are not a PCB remediation waste and are regulated as a PCB article and for disposal in 40 CFR 761, Subpart D. USEPA will address characterization and disposal of these articles in a separate letter.

The Notification addresses PCBs within the 6.5-acre ESGS Site where power generating Units 1 and 2 are located in addition to natural gas pipelines and other equipment. Units 1 and 2 are natural-gas-fired-steam turbines that ESP took offline permanently in December 2002; and by December 2010 ESP demolished the upper levels of these units. The 30,000-square-foot power block (concrete foundation) supporting Units 1 and 2 is contaminated with PCBs at concentrations above and below 50 mg/kg. Based on limited information provided in the

Notification, the PCB cleanup site encompasses the area within the 6.5-acre ESGS Site where Units 1 and 2 are located and areas adjacent to these Units. The PCB cleanup site also includes the areas where certain pieces of equipment and/or pipelines (e.g., natural gas pipelines) that may be potential sources of PCBs are or were located.

ESP, NRG, and AECOM must implement the Notification as modified by the conditions of approval. However, the Notification includes limited PCB characterization sampling data and the conditions of approval are requiring that ESP submit for USEPA review additional information including soil and concrete characterization data that may be currently available for the ESGS Site in reports referenced in the Notification. Upon review of the requested information, USEPA may require ESP to meet additional conditions of approval and/or USEPA may modify, as necessary, the conditions established in the attached PCB cleanup approval.

Several stockpiles of PCB-contaminated concrete from the demolition of Units 1 and 2 are currently staged at the ESGS Site. The PCB-contaminated power block for Units 1 and 2 is intact. As requested by NRG and ESP, USEPA is approving the offsite disposal of PCB-contaminated concrete in stockpiles Slab-1, Slab-2, and Slab-3. USEPA is also approving the removal and offsite disposal of sections of the concrete power block exceeding 25 mg/kg PCBs. These approvals are subject to the conditions in Section C of the attached approval and are in advance to additional characterization of the Site and the required PCB cleanup.

In reference to NRG and ESP's request for onsite disposal of PCB-contaminated concrete in stockpiles AGCON-1 and AGCON-2, USEPA is requiring that ESP conduct additional characterization of these piles consistent with the requirements in 40 CFR 761, Subpart R. These stockpiles are 40 feet (ft) by 100 ft by 16.8 ft (height) and 40 ft by 100 ft by 8.5 ft (height), respectively; and in total contain about 4,000 cubic yards of concrete. Although ESP has indicated that Subpart R does not apply to sampling of these piles, Subpart R provides sampling procedures specific to piles. Therefore, USEPA has determined that Subpart R requirements should apply to the sampling of these piles. Moreover, it is important to properly characterize this waste since ESP proposes to dispose of the concrete in these piles onsite (i.e., at the ESGS Site).

We look forward to be of assistance during ESP's and NRG's implementation of the approved PCB Cleanup Notification as modified by USEPA's conditions of approval. Please call Carmen D. Santos at 415.972.3360 if you have any questions concerning this conditional approval.

Sincerely,

for Jeff Scott, Director
Waste Management Division

Enclosures (1)

Cc: Marybeth Hayes, AECOM
Steve Williams, AECOM
Nick LaPorte, NRG Energy, Inc.
Christine Bucklin, DTSC

Henry Jones, LA RWQCB
Steve Armann, USEPA R9
Carmen Santos, USEPA R9

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

April 1, 2011

USEPA Conditional Approval for Former El Segundo Power Generating Station
301 Vista Del Mar Boulevard, El Segundo, California 90245
TSCA PCB Cleanup Under 40 CFR 761.61(a) and 761.61(c)

A. Introduction

The U.S. Environmental Protection Agency Region 9 (USEPA) hereby approves with conditions the *"Notification of In-Place Soil Characterization and Remediation, Former Units 1&2 Powerblock Foundation, El Segundo Generating Station, El Segundo, California,"* dated March 2, 2011 (Notification) and prepared by AECOM for El Segundo Power, LLC (ESP). The Notification is for additional characterization sampling and cleanup of polychlorinated biphenyls (PCBs) at the El Segundo Generating Station (ESGS) in El Segundo, California. This approval is effective on the date of this enclosure. Section C below contains the conditions of approval.

Any party cleaning up PCBs from soils and structures must do so consistent with the requirements set forth at 40 CFR 761.61. The Toxic Substances Control Act (TSCA) PCB regulations in 40 CFR 761.61 establish PCB cleanup options consisting of self-implementing (40 CFR 761.61(a)), performance-based (40 CFR 761.61(b)), or risk-based (40 CFR 761.61(c)) cleanup alternatives. Depending on site-specific factors, USEPA may approve and require implementation of a PCB cleanup following a hybrid approach that applies requirements from multiple cleanup options.

USEPA is approving the Notification under the TSCA regulatory requirements for PCBs in 40 CFR 761.61(a) and (c). Section C below identifies under which of these requirements ESP will conduct different elements of the required PCB sampling and cleanup.

B. El Segundo Generating Station (ESGS) Site and PCB Cleanup Site, Current Land and Ground Water Use, Sources of PCB Contamination, Future Land Use, and PCB Cleanup

1. **El Segundo Generating Station (ESGS) Site and PCB Cleanup Site.** The 6.5-acre northern portion of the ESGS is the ESGS Site and such Site contains power generation Units 1 and 2. Each of these Units encompassed the main power block that consisted of a multi-story structure containing the natural-gas-fired boilers and steam turbines. Based on limited information provided in the Notification, the PCB cleanup site encompasses the area within the 6.5-acre ESGS Site where Units 1 and 2 are located and areas adjacent to these Units. The PCB cleanup site also includes the areas where certain pieces of equipment and/or pipelines (e.g., natural gas pipelines) that may be potential sources of PCBs are or were located. The PCB cleanup site may not be limited to the areas mentioned herein.

2. **Current Land and Ground Water Use.** According to the Notification, the current land use for the ESGS property is heavy industrial (M2). The property is surrounded by the landside operations of the Chevron Marine Terminal to the north; Vista Del Mar Street and Chevron Refinery to the east; a public bicycle path and the Pacific Ocean to the west; and 45th Street to the south with access to the bicycle path, beach, and other amenities. According to the Notification, the Los Angeles Regional Water Quality Control Board's (LA RWQCB's) November 2, 2002 Resolution No. 98-018 has designated ground water beneath the site as non-

potable water/non-beneficial use. However, we understand from the Department of Toxic Substances Control (DTSC) that a dissolved phase solvent plume is flowing from the Chevron facility beneath and across the ESGS. Ground water flows to the north and northwest (toward the Pacific Ocean) of this property and likely to be subject to tidal influence due to the proximity of the Pacific Ocean to the ESGS. Total petroleum hydrocarbons, benzene, toluene, xylene, and ethylbenzene are among ground water contaminants of concern.

3. **Sources of PCB Contamination.** Among other possible equipment, transformers, vacuum pumps and associated equipment (e.g., receiving tanks, piping), and air compressors and associated equipment (e.g., compressed air cylinders, air pipelines) are potential sources of PCB contamination at the ESGS site. PCB Aroclors 1242, 1248, 1254, 1260, and 1262 have been detected at the site in concrete and soils.

4. **Future Land Use.** According to the Notification the future land use for the ESGS is heavy industrial. A new 560-megawatt, power generating facility will be constructed at the ESGS Site after ESP completes the demolition of Units 1 and 2 and associated pipelines and environmental cleanup work (not limited to the TSCA PCB-cleanup) at the ESGS Site. NRG anticipates the new power plant replacing Units 1 and 2 will be operational in 2013.

5. **PCB Cleanup.** Among other requirements, the conditions of approval for the PCB cleanup at the ESGS Site require that ESP:

   - Submit additional information (such as leaching test results, soil characterization data) for USEPA review and use in approving a PCB cleanup level for the ESGS Site.
   - Propose a PCB cleanup level for soils and porous surfaces at the ESGS Site for USEPA approval under 40 CFR 761.61(a) or (c).
   - Implement as applicable, a PCB cleanup level for non-porous surfaces (e.g., metal) of 10 ug/100 cm^2 as measured via standard wipe tests. These non-porous surfaces exclude natural gas pipelines.
   - Submit for USEPA approval a Sampling and Analysis Plan (SAP) covering characterization sampling for soils, concrete, asphalt, and non-porous surfaces (e.g., metal surfaces) and cleanup verification sampling for soils. USEPA will approve the SAP under 40 CFR 761.61(c).
   - Conduct additional soil, concrete, asphalt, and non-porous surfaces characterization sampling following the approved SAP. Soil directly beneath asphalt, concrete, and/or pipelines is included in the soils to be sampled.
   - Excavate and dispose offsite (under 40 CFR 761.61(a)) PCB-contaminated soils, concrete, and asphalt above the PCB cleanup level still to be approved by USEPA. This includes any soils contaminated with PCBs above the cleanup level that may be present beneath concrete, pipelines, and/or asphalt.
   - Conduct soil cleanup verification sampling and analysis in accordance with the required SAP (to be approved under 40 CFR 761.61(c)).
   - Dispose offsite other cleanup wastes in accordance with 40 CFR 761.61(a).
   - Dispose onsite (i.e., at the ESGS Site) PCB-contaminated soils and concrete subject to certain conditions established in this approval. Onsite disposal of PCB-contaminated soils and/or concrete is subject to approval under 40 CFR 761.61(c).
   - Submit for USEPA approval a PCB Cleanup Completion Report.
   - Restrictive covenant recorded in accordance with state law that among other information documents the onsite disposal of PCBs and cap maintenance and repair.

C. USEPA's Conditions of Approval

AECOM submitted the March 2, 2011 Notification for a PCB cleanup at the ESGS Site on behalf of El Segundo Power, LLC (ESP). ESP is "a wholly owned subsidiary of NRG Energy, Inc. and owner of El Segundo Generating Station (ESGS)." AECOM is ESP's environmental consulting firm (cleanup party).

This conditional approval does not relieve the owner from complying with all other applicable federal, state, and local regulations and permits. ESP, NRG, and AECOM must comply with the specified PCB cleanup requirements in 40 CFR 761.61(a) and (c) and the approved Notification as modified by the conditions of approval herein.

Departure from the approval conditions herein without prior written permission from USEPA may result in the commencement of proceedings to revoke this approval, and/or an enforcement action. Nothing in this approval bars USEPA from imposing penalties for violations of this approval or for violations of other applicable TSCA PCB requirements or for activities not covered under this approval.

This approval only applies to the ESGS Site. USEPA reserves the right to require additional characterization and/or cleanup of PCBs at the ESGS Site if new information shows that PCBs remain at the Site above the USEPA-approved PCB cleanup levels or if PCBs are found at other areas of the ESGS Site.

USEPA is hereby approving the ESP Notification as modified by the conditions of approval established below. ESP, AECOM, and NRG must implement the Notification as modified by these conditions.

1. **Request for Additional Information.** Within 30 days after the date of this approval, ESP shall propose a PCB cleanup level for the ESGS Site that among other factors (e.g., land use assumptions) accounts for the leaching ability of PCBs from soils and "3" minus crushed concrete" (crushed concrete). USEPA will approve or modify the PCB cleanup level that ESP proposes in the future based on the review of the information requested in this approval. Within 15 days after the date of this approval, submit for USEPA review the results of the leaching test already conducted by ESP in March 2011 together with sample collection procedures and laboratory PCB analysis results for concrete samples used in the leaching test.

   In addition, USEPA is requiring that PCB leaching tests for PCB-contaminated crushed concrete be repeated and that PCB-contaminated soils also be tested for PCB leaching ability consistent with Condition C.1.a below. Within 15 days after the date of this approval, ESP shall also submit for USEPA review and approval the plan to sample PCB-contaminated concrete and soils to conduct the required additional site-specific leaching tests and the site-specific leaching test procedure that will be used. See Conditions C.1.a and C.3 below.

   a. **PCB leaching test results and request for additional leaching tests[1].** A dissolved solvent-phase ground water plume is located beneath the ESGS Site and tidal influence is likely to impact the shallow

[1] ESP has proposed to dispose onsite concrete and soils contaminated with PCBs below 25 mg/kg beneath the new foundation that will be constructed for the new power plant. To support this approach, ESP proposed in the Notification to test the leaching ability of PCBs from PCB-contaminated "3"minus crushed concrete" using leaching tests such as the Synthetic Precipitation Leaching Procedure (SPLP) and California Waste Extraction Test Procedure (WET). However, the

ground water table (about 6 to 12 feet below ground surface [bgs]) at the Site. Therefore, potential co-solvency of PCBs must be accounted for in site-specific evaluations of the leaching ability of PCBs from PCB-contaminated soils and crushed concrete proposed for onsite disposal at the ESGS Site. Extraction fluids for the leaching tests must include the contaminated ground water beneath the site. Under the worst case scenario, the assumption is that solvent-contaminated ground water potentially mixed with sea water would interact with the PCB-contaminated soils and crushed concrete. ESP must demonstrate that onsite disposal of these PCB-containing wastes will not result in an unreasonable risk of injury to health and/or the environment.

ESP has proposed to use SPLP and WET leaching tests, but these may not be the applicable leaching tests in situations where soil may be already contaminated with PCBs and/or solvents. The Notification included limited data for PCBs in soils at the Site and USEPA is not otherwise aware of solvent and total petroleum hydrocarbon (TPH) contamination in soils (including saturated soils) above the water table. Therefore, EPS must propose an appropriate leaching test procedure to determine the leaching ability of contaminated soils and concrete that is otherwise reflective of site-specific subsurface conditions.

b. **Dust management plan.** Within 15 days after the date of this approval, ESP must submit a dust management plan that includes outdoor air sampling and it is designed to be protective of workers and the public during crushing of PCB-contaminated concrete, demolition of below ground structures, and demolition of any remaining above ground structures at the Site. The dust management plan shall also be implemented during movement and removal of concrete from the concrete stockpiles and power block at the Site. Workers must be adequately protected to prevent exposure to PCBs via inhalation of PCB-containing dust particles or incidental ingestion of such particles. USEPA recommends that if possible, real time measurements for PCBs in outdoor air dust be conducted. See Condition C.2.

c. **Revised written, signed certification.** Within 15 days after the date of this approval, the certification required under 40 CFR 761.61(a)(3)(i)(E) must be resubmitted. The certification must be signed by both the owner of the property and the cleanup party. The certification must include the language under the definition of "Certification" in 40 CFR 761.3 and the language in 40 CFR 761.61(a)(3)(i)(E).

d. **Soil sampling data in Table 1 of the Notification.** Within 15 days after the date of this approval, ESP shall submit a map or figure depicting the location of the soil samples listed in Table 1 of the Notification.

e. **Laboratory analytical reports.** Within 15 days after the date of this approval, submit for USEPA review the laboratory analytical reports for soil and concrete samples listed in Tables 1 and 2 of the Notification.

2. **Concrete Stockpiles Currently at the ESGS Site; and Specific Sections of PCB Contaminated Power Block Supporting Power Units 1 and 2. Offsite Disposal.**

a. **Concrete stockpiles Slab-1, Slab-2 and Slab-3.** The PCB-contaminated concrete in onsite stockpiles represented by samples Slab-1-CON-1 through Slab-1-CON-20; Slab-2-1 through Slab-2-3; and Slab-3-1 through Slab-3-5 listed in Table 2 of the Notification shall be disposed offsite as bulk PCB remediation

---

proposed leaching tests were not modified to account for site-specific subsurface conditions. ESP is awaiting the results of the PCB leaching tests conducted in March 2011.

waste in accordance with the requirements in 40 CFR 761.61(a)(5)(i)(B)(2)(iii) and consistent with all applicable state and local regulatory requirements.

b. **Units 1 and 2 power block.** All sections of the PCB-contaminated power block already characterized for PCBs and containing PCBs above 25 mg/kg must be separated and removed from the power block and disposed offsite in accordance with the requirements in 40 CFR 761.61(a)(5)(i)(B)(2)(iii) and applicable state and local regulations. The 25 mg/kg level is being tentatively applied as a guideline for offsite disposal of PCB-contaminated concrete as proposed by ESP and must not be construed as USEPA's decision on the PCB concentration that will be allowed in soil and concrete for onsite disposal.

c. **Concrete stockpile AGCON-1.** ESP has proposed to dispose onsite at the ESGS Site the concrete in stockpile AGCON-1. ESP must conduct additional characterization sampling of concrete in AGCON-1 following the requirements in 40 CFR 761, Subpart R and that sampling must be representative of the size and depth of the pile. AGCON-1 is approximately 40 feet (ft) by 100 ft by 16.8 ft (height). This additional sampling is to properly characterize the concrete in the pile and confirm the concentration range of PCBs in concrete from AGCON-1. This data will be compared to the PCB cleanup level to be approved for the Site.

   Based on Table 2 in the Notification, PCBs were detected in concrete at AGCON-1 and sample AGCON-1-44 contains 33,470 ug/kg PCBs (33.5 mg/kg PCBs) which is the highest PCB level compared to the remaining 49 concrete samples collected from AGCON-1. However, AGCON-1 was not sampled following the requirements in 40 CFR 761, Subpart R and sample locations were not surveyed. If the location of sample AGCON-1-44 can be identified, USEPA recommends that sections of concrete in stockpile AGCON-1 represented by sample AGCON-1-44 be removed and disposed offsite. Offsite disposal of this concrete must be in accordance with the disposal requirements in 40 CFR 761.61(a)(5)(i)(B)(2)(iii) as proposed by ESP; or in accordance with the requirements in 40 CFR 761.61(a)(5)(i)(B)(ii). Disposal of this PCB waste must be in accordance with all applicable state and local regulations.

d. **Concrete stockpile AGCON-2.** ESP has proposed to dispose onsite at the ESGS Site the concrete in stockpile AGCON-2. ESP must conduct additional characterization sampling of concrete in stockpile AGCON-2 following the requirements in 40 CFR 761, Subpart R and that sampling must be representative of the size and depth of the pile. AGCON-2 is approximately 40 feet (ft) by 100 ft by 16.8 ft (height). This additional sampling is to properly characterize the concrete in the pile and confirm the concentration range of PCBs in concrete from AGCON-2. This data will be compared to the PCB cleanup level to be approved for the Site.

e. **Notification of PCB activity.** ESP must comply with the notification and manifest requirements of 40 CFR 761, Subpart K when transporting, storing, and disposing of PCBs offsite. ESP must comply with the requirements in 40 CFR 761.65(c)(1) and ESP's storage of PCB waste must not trigger the more stringent requirements in 40 CFR 761.65(b) and 761.65(c)(7) to be exempted from filing the Notification of PCB Activity as a generator of PCB waste.

3. **Concrete Stockpiles AGCON-1 and AGCON-2 Currently at the ESGS Site; and Specific Sections of the PCB-Contaminated Power Block Supporting Power Units 1 and 2. Onsite Disposal.** ESP must conduct additional characterization sampling of stockpiles AGCON-1 and AGCON-2 following the requirements in

40 CFR 761, Subpart R. Concrete from the power block, AGCON-1, and AGCON-2 with PCB concentrations equal to or below the cleanup level to be approved by USEPA may be disposed onsite subject to certain conditions to be established by USEPA. Refer to Conditions C.1 and C.4.

4. **PCB Cleanup Level; and Cleanup Verification Sampling Data Comparison to Cleanup Level.**

   a. **Cleanup level for soils and concrete under 40 CFR 761.61(a) or (c).** Under 40 CFR 761.61(a) or (c), USEPA will approve or modify the PCB cleanup level for soils and porous surfaces (e.g., concrete) that ESP is required to propose in Condition C.1 for the ESGS Site. That cleanup level will be the maximum concentration of PCBs in concrete and soils for onsite disposal at the ESGS Site. Under 40 CFR 761.61(a), USEPA is approving a PCB surface cleanup level of 10 ug/100 cm^2 PCBs for non-porous surfaces (if present) that are PCB remediation waste (excludes natural gas pipelines).

   b. **Demonstration of compliance with concrete and soil cleanup level.** ESP will calculate the distribution-specific 95% confidence limit of the mean (i.e., the exposure-point concentration) of the analysis results for bulk concrete characterization samples, soil characterization samples, and soil cleanup verification samples separately using USEPA's ProUCL statistical program and compare that exposure point concentration for soils and concrete to the cleanup level. If the exposure point concentration is above the PCB cleanup level, ESP must remove from the concrete stockpile that concrete with PCB concentrations contributing to an exposure point concentration higher than the cleanup level. If the exposure point concentration for soils is higher than the cleanup level, ESP must conduct additional cleanup of soils and collect cleanup verification samples until the exposure point concentration calculated via ProUCL using this additional data is below the cleanup level.

      If the cleanup level is not achieved after reducing PCB concentrations in the stockpile (via removal of concrete with highest concentrations) and/or after further soil cleanup, ESP shall propose a physical barrier effective for the long term that will be installed to prevent contact of the PCB-contaminated concrete and/or soil (proposed for onsite disposal) with ground water and that water is potentially impacted by tidal influence. This barrier would be installed below ground surface and a cap would also need to be installed to cover the onsite PCB disposal area.

5. **Sampling and Analysis Plan under 40 CFR 761.61(c).** Within 15 days after the date of this approval, ESP must submit a Sampling and Analysis Plan (SAP) for USEPA approval that includes the information described below. The SAP is subject to USEPA's approval under 40 CFR 761.61(c). The SAP must address additional soil, concrete, and asphalt characterization sampling, and soil cleanup verification sampling under 40 CFR 761.61(c).

   a. **Purpose of sampling and analysis plan.** Data quality objectives for the characterization and cleanup verification sampling.

   b. **Soil and concrete characterization sampling.** A table summarizing additional concrete, soil, asphalt, and non-porous surfaces characterization sampling. The summary table must include the media (e.g., soil, concrete) being sampled, type (e.g., discrete), collection method (e.g., wipe samples), and number of samples to be collected for additional characterization, location of samples referencing associated sample identification codes, analytes (e.g., PCB Aroclors), sampling methods, PCB extraction method, laboratory analysis method, laboratory and field quality control (QC) samples, analytical detection limits, and pre-

analysis sample extract cleanup methods. For concrete in stockpiles, characterization sampling of the pile must follow the requirements in 40 CFR 761, Subpart R.

c. **Soil cleanup verification sampling.** If PCB contaminated soils (including soils beneath asphalt, concrete, pipelines (e.g., natural gas pipelines), and/or other structures) are present at the site, a table summarizing soil cleanup verification samples must be included in the SAP. The summary table must include the type, spacing, and number of samples, associated sample identification codes, location of samples, analytes, sampling methods, laboratory and field QC samples, analytical detection limits, and pre-analysis sample extract cleanup procedures.

d. **Figures, characterization and cleanup verification samples.** Figures depicting location, spacing, number of samples, and sample identification codes for soil and concrete characterization sampling; and for soil cleanup verification sampling.

e. **Sampling grid.** The sampling grid that ESP will follow for collection of soil cleanup verification samples. That grid cannot be smaller than the grid used for characterization as implied in the Notification.

f. **Quality control (QC).** A description of quality control (QC) procedures that will be implemented during sample collection (characterization and cleanup verification sampling) and number and type of field QC (e.g., duplicates) samples to be collected for soil, concrete, and asphalt. The SAP must describe the laboratory QC samples (i.e., surrogate spikes, matrix spikes, equipment blanks) that will be prepared and analyzed by the contracted analytical laboratory.

g. **Additional SAP Requirements.** The SAP must meet the requirements in Conditions C.1 through C.4, and C.6 through C.8.

6. **Extraction and Analytical Methods.** Under the TSCA PCB regulations the applicant has the option to choose either the Soxhlet extraction method (USEPA Method 3540C) or the Ultrasonic method (USEPA Method 3550C). The Soxhlet extraction method is preferred by USEPA for both concrete and soil samples. ESP must submit the laboratory's Standard Operating Procedure for our review within 21 days after the date of this approval. If necessary, post extraction and pre-analysis sample cleanup (e.g., USEPA Methods 3665A [sulfuric acid], 3620C [florisil column], 3640A [Gel Permeation Column, GPC]) procedures must be considered if matrix interferences are suspected that could increase analytical method detection limits and compromise comparisons of analytical results to the cleanup levels required in this approval.

7. **Additional Characterization of PCBs in Soils.** In accordance with the TSCA requirements in 40 CFR 761.61(c), USEPA is requiring additional characterization of soils including and not limited to soils above the ground water table for PCBs and other contaminants present at the Site, and soils beneath concrete, asphalt, and Site structures such as pipelines. ESP must conduct in-situ soil characterization sampling for PCBs and not post excavation as suggested in AECOM's February 14, 2011 "Soil Management Guidance for El Segundo Generating Station. . ." ESP shall propose the characterization sampling method for these soils in the required SAP. ESP must propose the location, spacing, depth, and number of subsurface soil characterization samples that it will collect.

8. **Cleanup of Soils and Asphalt; and Cleanup Verification Sampling.** USEPA will approve cleanup verification sampling for soils under the TSCA PCB regulations in 40 CFR 761.61(c). Soil cleanup involves

excavation of soils contaminated with PCBs above the cleanup level followed by offsite disposal. Asphalt cleanup involves removal of asphalt containing PCBs followed by offsite disposal.

a. Soils and asphalt contaminated with PCBs above the cleanup level to be approved by USEPA must be removed and disposed offsite in accordance with the requirements in 40 CFR 761.61(a)(5)(i)(B)(2)(ii), (iii), and (iv).
b. ESP shall propose the number, spacing, and depth of soil samples that it will collect to verify the PCB cleanup level has been met in soils. The cleanup verification sampling grid shall not be smaller than the grid or sample spacing used for characterization sampling.
c. If based on cleanup verification samples PCBs remain in soil above the cleanup level, additional cleanup must be conducted to meet the cleanup level.
d. If the cleanup level is not met after completing a third round of soil cleanup, ESP must propose the next steps it will take to meet the cleanup level or propose how it will dispose of the soils onsite in a manner that it will not result in a risk of injury to health and the environment.

9. **Deed Restriction; and Maintenance, Inspection, and Repair Plan for Concrete Cap (Cap Plan).** ESP will install a cap to cover soils and/or concrete contaminated with PCBs to be disposed onsite. Within 60 days after USEPA has completed review and approval of the language in the proposed restrictive covenant, ESP must record the deed restriction (restrictive covenant) in accordance with state law that includes the USEPA-approved ESP Cap Plan, PCB Cleanup Report, and USEPA's PCB cleanup approval letter. At a minimum, the information described in 40 CFR 761.61(a)(8) shall be included in the restrictive covenant. USEPA will provide additional guidance on this Condition.

10. **Decontamination of Movable Equipment, Tools, and Sampling Equipment Contaminated by PCBs.** Equipment not covered in the USEPA Region 1 SOP must be decontaminated following the requirements in 40 CFR 761.79(c)(2).

11. **PCB Waste Disposal, Decontamination Residues, and Cleanup Wastes.** Decontamination residues and cleanup wastes must be disposed based on their original PCB concentration in accordance with 40 CFR 761.79(g)(2), (g)(6), and 40 CFR 761.61(a)(5), (a)(5)(i), (a)(5)(iii), and (a)(5)(v). Concrete and/or other porous surfaces(s) contaminated with PCBs above the PCB cleanup level to be approved must be disposed of as bulk PCB remediation waste in accordance with the requirements in 40 CFR 761.61(a)(5)(i)(B)(2)(ii), (a)(5)(v)(A), and (a)(5)(i)(B)(2)(iii). Disposal of all wastes (e.g., personal protective equipment, soils, concrete) generated during cleanup of PCBs must be in compliance with all applicable federal, state, and local regulations.

12. **PCB Cleanup Completion Report.** Within 60 days after ESP demonstrates that residual PCBs in soils are equal to or below the cleanup level to be approved by USEPA, ESP must submit a PCB Cleanup Completion Report for USEPA approval (under 40 CFR 761.61(c)). This report must demonstrate compliance with all the conditions of approval and applicable TSCA PCB regulations in addition to applicable state and local regulations. ESP may refer to 40 CFR 761.61(a)(9) and 761.125(c)(5) as a guideline to prepare the report and such guideline represents minimum requirements for the required PCB Cleanup Report. This report must provide all relevant sampling and analysis data and justifications demonstrating that ESP achieved the USEPA approved PCB cleanup levels and that it met the conditions of approval.

13. **Green Space along the East Boundary of ESGS.** Within 15 days after the date of this approval, confirm in writing that PCBs have not impacted the green space area along the east boundary of the ESGS and that PCB cleanup activities will not impact this area.

D. Not Covered by this Approval

1. **Health and Safety Plan.** This approval does not cover approval of any Health and Safety Plan(s) that may be referenced in the Notification or other documents incorporated into the Notification by reference.

2. **Natural Gas Pipelines.** USEPA will address characterization and disposal of natural gas pipelines and other PCB articles and items that may be still present at the ESGS Site in a separate letter.